



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,913	07/03/2000	Jerry L. Mizell	NORT0027 (11439RRuS02U)	3274
21906 7590 03/07/2007 TROP PRUNER & HU, PC 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			EXAMINER NG, CHRISTINE Y	
			ART UNIT	PAPER NUMBER
			2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/609,913

Applicant(s)

MIZELL ET AL.

Examiner

Christine Ng

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,8-10,19-21,40-44,46 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,8-10,19-21,40-44,46 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the appeal brief filed on November 27, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 3, 8, 19, 20, 40-43, 46 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,512,756 to Mustajarvi et al in view of U.S. Publication No. 2002/0048268 to Menon et al.

Referring to claims 2 and 3, Mustajarvi et al disclose in Figure 1 a serving GPRS support node (SGSN1) for use in a mobile communications network having a plurality of cell sites (cell 1 and cell 2). The SGSN comprises:

An interface (Gb interface) adapted to communicate with a base station system (BSS) over a network (IP over frame relay network). Refer to Column 1, lines 30-52.

A controller (in SGSN1) adapted to transmit and receive data through the interface over the network with the base station system according to a connectionless, packet-switched protocol (IP). Frame relay is used over the Gb interface for communication between the SGSN and BSS. The IP protocol layer is placed above the frame relay layer in the SGSN protocol stack, which enables an IP over frame relay protocol. Refer to Column 1, line 65 to Column 2, line 28.

Wherein the interface includes a connectionless, packet-based protocol layer (Figure 2, L3MM protocol and be replaced by IP) to communicate packets with the base station system. Refer to Column 1, line 65 to Column 2, line 4.

Mustajarvi et al do not disclose a connectionless, packet-based protocol layer in the base station system.

Menon et al disclose in Figure 24 that there is connectionless, packet-based protocol layer (IP layer 338) in the base station system BTS 335. Refer to Section 0297. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a connectionless, packet-based protocol layer in the base station system. One would have been motivated to do so so that the base

Art Unit: 2616

station can manage the IP functionality of the system, thereby load balancing the IP processing among different nodes.

Referring to claims 8 and 46, Mustajarvi et al disclose in Figure 1 a node (BSS) for use in a mobile communications network having a system controller (SGSN1). The node (BSS) comprises:

One or more radio transceivers (antenna on BTS1) adapted to communicate with mobile stations (MS).

A module (BSC1) coupled to the one of more radio transceivers and adapted to communicate through a Gb interface (Gb) with the system controller according to a packet-switched protocol (IP). Refer to the rejection of claims 2 and 3.

Wherein the packet-switched protocol comprises a connectionless, packet-based protocol (IP). Refer to the rejection of claims 2 and 3.

Referring to claim 19, Mustajarvi et al disclose in Figure 1 a serving General Packet Radio Service support node (SGSN1) for use in a mobile communications system having base station systems (BSS). The SGSN comprises:

An interface (Gb interface) to one or more networks coupled to the base station systems, the interface comprising a packet-switched element (Figure 2, L3MM protocol and be replaced by IP) to manage communication over a network between the serving GPRS node and at least one of the base station systems. Refer to the rejection of claims 2 and 3.

Wherein the packet-switched element comprises an Internet Protocol element (Figure 2, L3MM protocol and be replaced by IP) to communicate packets with the at least one base station system. Refer to the rejection of claims 2 and 3.

Mustajarvi et al do not disclose an Internet Protocol element in the base station system. Refer to the rejection of claims 2 and 3.

Referring to claim 20, Mustajarvi et al do not disclose that the SGSN further comprises a User Datagram Protocol transport component to manage connections over the network.

Menon et al disclose in Figure 24 that an access router (AR 340) further comprises a User Datagram Protocol transport component (UDP layer 339) to manage connections over the network. Although the UDP layer 339 is in the BTS 335, its services are still used over the interface between BTS 335 and AR 340 since the UDP layer 339 uses the services of the IP layers 338,344 below it. The AR 240 thus performs a similar operation as a SGSN in a GPRS system, in that they both provide access to an IP network. Refer to Sections 0295 and 0296. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the SGSN further comprises a User Datagram Protocol transport component to manage connections over the network. One would have been motivated to do so in order to provide a transport network layer to manage network connections.

Referring to claim 40, Mustajarvi et al disclose in Figure 2 wherein the connectionless, packet-based protocol layer of the interface comprises a network layer (L3MM protocol and be replaced by IP). Refer to Column 1, line 65 to Column 2, line 4.

Art Unit: 2616

Mustajarvi et al do not disclose that the interface further comprises a transport layer to manage connections of the network. Refer to the rejection of claim 20.

Referring to claim 41, Mustajarvi et al do not disclose that the controller comprises a network services layer to transport packets through the transport and network layers.

Menon et al disclose in Figure 24 that the controller comprises a network services layer (subnetwork protocol layer 343) to transport packets through the transport (UDP layer 339) and network (IP layer 344) layers. The subnetwork protocol layer 343 is below the IP layer 344 and UDP layer 339, so therefore provides services to upper layers. Refer to Sections 0295 and 0298. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that that the controller comprises a network services layer to transport packets through the transport and network layers. One would have been motivated to do so so that the network services layer can provide services to the transport and network layers to facilitate network connections and data transmission.

Referring to claim 42, refer to the rejection of claims 2 and 3, 19, 40 and 41.

Referring to claim 43, refer to the rejection of claim 20.

Referring to claim 49, refer to the rejection of claims 2 and 3.

Referring to claims 50 and 51, refer to the rejection of claims 2 and 3, and 46.

3. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,512,756 to Mustajarvi et al in view of U.S. Publication No.

Art Unit: 2616

2002/0048268 to Menon et al, and in further view of U.S. Patent No. 6,763,007 to La Porte et al.

Mustajarvi et al do not disclose that each data packet contains Internet Protocol addresses identifying the node and the system controller.

La Porte et al disclose in Figure 19 a data packet has IP addresses identifying the source and destination. An IP packet 612 contains a source address 614 set to the IP address of the source node, a destination address 616 set to the IP address of the destination node, and data payload 618. Refer to Column 33, lines 50-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that each packet contains Internet Protocol addresses identifying the node and the system controller; the motivation that a source and destination field are necessary to determine a route for the data transmission through the network.

4. Claims 21 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,512,756 to Mustajarvi et al in view of U.S. Publication No. 2002/0048268 to Menon et al, and in further view of U.S. Patent No. 6,320,873 to Nevo et al.

Referring to claim 21, Mustajarvi et al do not disclose that the SGSN further comprises a network services layer to transport data units containing signaling and bearer traffic over the network.

Nevo et al disclose in Figure 2B that the SGSN (Element 52) comprises a network services layer to transport BSSGP packet data units (PDUS) between the BSS and SGSN over a frame relay connection. "The BSSGP layer conveys routing and

Art Unit: 2616

information related to quality of service (QOS) between the BSS 32 (or BSS 30) and SGSN 52" (Column 7, lines 1-3). Layers shown in Figure 2B are communications protocol layers "required to adapt a signaling and data stream from MS 40 for transport to GPRS 50" (Column 7, lines 61-63). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include that the SGSN comprises a network services layer to transport data units over the network, the motivation being that a network services layer transports BSSGP PDUS between the BSS and SGSN, conveying routing and QOS information. Refer to Column 6, line 60 to Column 7, line 6.

Referring to claim 44, Mustajarvi et al do not disclose that the network services layer comprises a General Packet Radio Service network services layer.

Nevo et al disclose in Figure 2B that the SGSN (Element 52) comprises a network services layer to transport BSSGP packet data units (PDUS) between the BSS and SGSN over a frame relay connection. Refer to Column 6, line 60 to Column 7, line 6. Although the network services layer does not specifically include a GPRS network services layer, Nevo et al disclose that the protocol stacks are used for transport in a GPRS system, thereby requiring that the layers each support GPRS. Refer to Column 7, lines 60-65. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the network services layer comprises a General Packet Radio Service network services layer; the motivation being in order so the protocol stacks to accommodate a GPRS system.

Art Unit: 2616

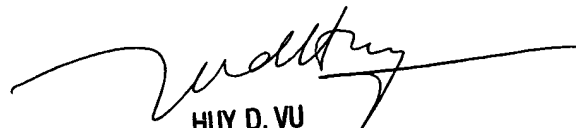
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

~
C. Ng
February 26, 2007


HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600